Atriplex gardneri
Gardner's Saltbush
by Kathy Lloyd, Montana Native Plant Society

Gardner's saltbush also goes by the common name of moundscale or Nuttall's saltbush. Plant taxonomists used to classify this plant as *Atriplex nuttallii*, hence the common name Nuttall's saltbush, but the name was changed to *Atriplex gardneri* when some rearranging of the genus brought an earlier scientific name into the group. Unfortunately, scientific names for plants do change from time to time, and it can be quite a chore to keep up with them. Lewis and Clark probably didn't spend too much time worrying about what to name the various plant species they collected. They had their hands full with more immediate concerns.

Specimens of Gardner's saltbush were collected more than once during the long cross-country trek, and several collections of the plant still exist today as part of the Lewis & Clark Herbarium at the Academy of Natural Sciences in Philadelphia. Two different specimen sheets at the Lewis & Clark Herbarium contain Gardner's saltbush. The first sheet has one specimen of four-wing saltbush (*Atriplex canescens*) and two specimens of Gardner's saltbush (*Atriplex gardneri*). According to the label Frederick Pursh applied to the sheet, the plants on this specimen sheet were collected at the "Big Bend of the Missouri Septbr 21, 1804," placing the point of collection in South Dakota. This sheet also contains a portion of an original label by Meriwether Lewis that says, "Sept. 21st." The second specimen sheet contains two mounted specimens of Gardner's saltbush with a Pursh label reading, "A half Shrub from the high plains of Missouri Jul. 20th 1806," placing this collection squarely in present-day Montana.

Lewis's journal for July 20th describes the habitat that is characteristically associated with Gardner's saltbush, and with greasewood (*Sarcobatus vermiculatus*), which was collected on the same day: "the plains are more broken than they were yesterday and have become more inferior in point of soil; a great quanty of small gravel is every where distributed over the surface of the earth which renders travling extreemly painfull to our bearfoot horses. the soil is generally a white or whiteish blue clay…the mineral salts common to the plains of the missouri has been more abundant today than usual." On July 20th Lewis and his small party, separated from Clark's group, were exploring the Marias River drainage and camped about 5 miles southwest of present-day Shelby, Montana.

Gardner's saltbush is found from Alberta and Saskatchewan in Canada, south to Utah and Colorado and east to the Dakotas. It is considered rare in British Columbia and Manitoba, Canada. Gardner's saltbush is most common on saline, poorly developed, or clay soils with a pH of 7.8 to 8.6. Soils are typically low in available phosphorous, nitrogen, and potassium. Gardner's saltbush also grows on sodic, silty, or sandy soils. Sites are usually harsh and arid, with widely fluctuating temperatures and high winds.

Gardner's saltbush is a spreading, low-growing, evergreen, perennial member of the goosefoot family (Chenopodiaceae). It is often called a subshrub, being woody only at the base. It grows from eight to 20 inches in height and has alternate, gray-green leaves

up to two inches long. Herbaceous flowering stems rise above the woody, decumbent portion of the plant. Plants are typically dioecious, meaning that male and female flowers occur on separate plants. Gardner's saltbush has an extensive, highly branched root system that has been measured as deep as four and a half feet with a lateral spread up to seven feet. The plant reproduces vegetatively by layering and sprouting from the root, as well as from long-lived, wind-dispersed seed. The species tolerates poor site conditions. It is used to stabilize soils and to reclaim disturbed areas. It had one of the highest survival rates of all shrubs planted on processed oil shale (low in available phosphorous, nitrogen, and potassium) in the Uinta Basin of Utah, and was one of only two species to establish on coal mine spoils in Wyoming.

Gardner's saltbush provides nutritious, year-round forage for livestock and wildlife species throughout its range. Antelope, mule deer, rabbits, and mourning doves browse Gardner's saltbush. Its persistent leaves are an important winter food source. It is particularly important for sheep because it provides the minimum nutritional requirement for maintenance of gestating ewes.

Some American Indian tribes used Gardner’s saltbush for food and seasoning. Young stems were used as stuffing for roast rabbit and young stems and flower heads were used to flavor food. We don’t know if Lewis and Clark made use of Gardner’s saltbush for food or seasoning, but with Sacagawea’s influence, they may have. Surely they appreciated the wildlife species that found forage in otherwise inhospitable landscapes.

As you travel to Lewis and Clark sites in Montana, consider how native plants are suited to the landscape and help define the Big Sky Country.